AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of the claims in the present application.

Listing of Claims:

1. (Currently Amended) A device for waking up at least one targeted user of a bus system without waking up all of the users of the bus system, comprising:

a detection device for implementing a two-step wake-up procedure including:

performing a first step of transmitting, from a transmitter, a message on the bus system for detecting at least one predefined signal feature of the message and determining, as a function of a data pattern encoded within the message, the at least one targeted user as an intended target;

at only one of the users, receiving the message;

at the only one of the users receiving the message, determining if a preselected number of occurrences of the at least one predefined signal feature of the message has been reached;

~~responsive to the determining that~~ after the only one of the users has determined that the preselected number of occurrences has been reached, retransmitting, from the transmitter, the message on the bus system; and

determining one of a number of the users to be awakened and a group of users to be awakened based on the retransmitted message, each user being awakened only if the data pattern identifies at least one of the user and a group to which the user belongs;

wherein a length of the message is at least two bits, and

wherein the preselected number of occurrences of the at least one predefined signal feature is greater than one.

2. (Canceled)

3. (Original) The device according to claim 1, wherein the at least one signal feature includes at least one of an edge and an edge change of a signal.

4. (Original) The device according to claim 1, wherein the at least one signal feature includes at least one of a signal level and a preselected combination of a plurality of signal levels.

5. (Currently Amended) A targeted user of a bus system, comprising:

a detection device for implementing a two-step wake-up procedure including:

performing a first step of transmitting, from a transmitter, a message on the bus system for detecting at least one predefined signal feature of the message and determining, as a function of a data pattern encoded within the message, the at least one targeted user as an intended target;

at only one of the users, receiving the message;

at the only one of the users receiving the message, determining that a preselected number of occurrences of the at least one predefined signal feature of the message has been reached;

~~responsive to the determining that~~ after the only one of the users has determined that the preselected number of occurrences has been reached, retransmitting, from the transmitter, the message on the bus system; and

determining one of a number of the users to be awakened and a group of users to be awakened based on the retransmitted message, each user being awakened only if the data pattern identifies at least one of the user and a group to which the user belongs;

wherein a length of the message is at least two bits,

wherein the at least one predefined signal feature is assigned to the targeted user, whereby users of the bus system not associated with the at least one predefined signal feature do not detect the at least one predefined signal feature, and

wherein the preselected number of occurrences of the at least one predefined signal feature is greater than one.

6. (Canceled).

7. (Currently Amended) A method for waking up at least one targeted user of a bus system without waking up all of the users of the bus system, the method comprising:

(a) transmitting a message, from a transmitter, on the bus system;

(b) detecting, at only one of the users, at least one predefined signal feature of the message;

(c) at the only one of the users receiving the message, determining that a preselected number of occurrences of the at least one predefined signal feature of the message has been reached;

(d) ~~responsive to the determining that~~ after the only one of the users has determined that the preselected number of occurrences has been reached, retransmitting, from the transmitter, the message on the bus system; and

(e) determining one of a number of the users to be awakened and a group of users to be awakened based on the retransmitted message, each user being awakened only if the data pattern identifies at least one of the user and a group to which the user belongs;

wherein a length of the message is at least two bits, and

wherein the preselected number of occurrences of the at least one predefined signal feature is greater than one.

8. (Previously Presented) The method according to claim 7, wherein the message is evaluated for a possible wake-up message once the at least one predefined signal feature is detected.

9. (Original) The method according to claim 7, further comprising determining a time duration when the signal feature occurs for a first time.

10. (Original) The method according to claim 7, wherein binary information results from a time duration following a first occurrence of the signal feature.

11. (Canceled)

12. (Canceled)

13. (Currently Amended) A targeted user of a bus system, comprising:

a detection device for implementing a two-step wake-up procedure including:

performing a first step of transmitting, from a transmitter, a message on the bus system for detecting at least one predefined signal feature of the message and determining, as a function of a data pattern encoded within the message, the at least one targeted user as an intended target;

at only one of the users, receiving the message;

at the only one of the users receiving the message, determining that a preselected number of occurrences of the at least one predefined signal feature of the message has been reached;

~~responsive to the determining that~~ after the only one of the users has determined that the preselected number of occurrences of has been reached, retransmitting, from the transmitter, the message on the bus system; and

determining one of a number of the users to be awakened and a group of users to be awakened based on the retransmitted message, each user being awakened only if the data pattern identifies at least one of the user and a group to which the user belongs;

wherein a length of the message is at least two bits, and

wherein the preselected number of occurrences of the at least one predefined signal feature is greater than one.

14. (New) A hardware arrangement, comprising:

a plurality of users connected to a bus system, a first one of the plurality of users configured to communicate over the bus system while the remainder of the users are in one of a sleep mode and a power-off mode; and

a transmitter configured to transmit a wakeup message over the bus, wherein after receiving the message, the first user, in response to determining that a preselected number of occurrences of at least one predefined signal feature of the message has been reached, initiates a wakeup logic unit that, upon receipt of a subsequent retransmission of the message, reads out an identifier corresponding to a user or user group from the retransmitted message so that all users associated with the identifier can be awakened.

15. (New) The hardware arrangement of claim 14, wherein the first user includes a counter that is incremented in accordance with each occurrence of the at least one predefined signal feature.

16. (New) The hardware arrangement of claim 14, wherein an encoding of the identifier is read out by the wakeup logic unit in a manner that is time-independent of a transmission rate of the bus system.

17. (New) The hardware arrangement of claim 16, wherein a block of the encoding contains a logical 0 when a first set of bits is set high and the block contains a logical 1 when a second set of bits is set high.

18. (New) The hardware arrangement of claim 16, wherein the identifier is encoded in a data field of the message, the data field being divided into data blocks, at least one bit of the identifier being encoded in each block.